

Supplemental Amendment and Response

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Confirmation No.: 4980

Filed: 29 March 2001

For: METHOD FOR MAKING A STEM WEB

Amendments to the Claims

This listing of claims replaces all prior versions, and listings, of claims in the above-identified application:

1-10. (CANCELED)

11. (CURRENTLY AMENDED) A method of making a web material having a plurality of stems extending from discrete regions of the web, the method comprising:

providing a web comprising a first major surface and a second major surface;

providing a plurality of discrete quantities of a polymeric material on the first major surface of the web at a temperature above its softening point, wherein a plurality of discrete polymeric regions are formed on only the first major surface of the web; and

forming a plurality of stems in each discrete polymeric region of the plurality of discrete polymeric regions on the first major surface of the web.

12. (CANCELED)

13. (ORIGINAL) The method according to claim 11, wherein the discrete quantities of polymeric material are provided by extruding molten polymer in a form selected from intermittent quantities and continuous ribbons.

14. (ORIGINAL) The method according to claim 11, wherein the discrete quantities of polymeric material are provided by one or more rotating cutting blades positioned intermediate a source of polymeric material and the web, wherein the cutting blades cut the polymeric material into discrete quantities.

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15. (ORIGINAL) The method according to claim 11, further comprising deformation of the stems with a heated surface to produce an enlarged end on the stems.

16-21. (CANCELED)

22. (PREVIOUSLY PRESENTED) The method of claim 11, wherein the plurality of discrete polymeric regions are separated by inter-regions revealing exposed portions of a first major surface of the web.

23. (PREVIOUSLY PRESENTED) The method of claim 11, wherein the web comprises loop structures adapted to lock with the plurality of stems.

24. (PREVIOUSLY PRESENTED) The method of claim 11, wherein the web comprises an elastic web.

25. (PREVIOUSLY PRESENTED) The method of claim 11, wherein the plurality of discrete polymeric regions comprises a plurality of stripes extending over a first major side of the web.

26. (PREVIOUSLY PRESENTED) The method of claim 11, wherein the plurality of discrete polymeric regions covers between 20 and 80 percent of a first major side of the web.

27. (PREVIOUSLY PRESENTED) The method of claim 11, wherein the plurality of discrete polymeric regions covers between 5 and 25 percent of a first major side of the web.

28. (PREVIOUSLY PRESENTED) The method of claim 11, wherein each stem of the plurality of stems comprises a hook.

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29. (PREVIOUSLY PRESENTED) The method of claim 11, wherein the web defines a localized plane, and wherein the plurality of stems are oriented at an angle that is not normal to the localized plane.
30. (PREVIOUSLY PRESENTED) The method of claim 11, wherein the web defines a localized plane, and wherein the plurality of stems are oriented at an angle that is not normal to the localized plane, and further wherein the plurality of stems are angled in multiple directions.
31. (PREVIOUSLY PRESENTED) The method of claim 11, wherein forming a plurality of stems in each discrete polymeric region of the plurality of discrete polymeric regions comprises forcing the polymeric material of the plurality of polymeric regions against a tool comprising a plurality of angled holes, wherein the plurality of stems are oriented at an angle that is not normal to a localized plane defined by the web.
32. (PREVIOUSLY PRESENTED) A method of making a web construction comprising a plurality of stems distributed in discrete regions on the web construction, the method comprising:
- providing a web construction comprising a continuous or substantially continuous layer of polymeric material on an elastic substrate, wherein the polymeric material is at a temperature above its softening point;
 - providing a tool comprising a plurality of stem-forming holes formed in a surface of the tool, wherein the plurality of stem-forming holes are arranged in a plurality of discrete regions on the surface of the tool;
 - pressing the layer of polymeric material against the surface of the tool, wherein a portion of the polymeric material enters the stem-forming holes;
 - separating the layer of polymeric material from the surface of the tool, wherein a plurality of stems are distributed in a plurality of discrete regions on the web construction; and

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stretching the elastic substrate after separating the layer of polymeric material from the surface of the tool, wherein the layer of polymeric material fractures.

33. (CANCELED)

34. (PREVIOUSLY PRESENTED) The method of claim 32, further comprising forming indentations in the layer of polymeric material between the plurality of discrete regions of stems, wherein the layer of polymeric material fractures along the indentations.

35. (PREVIOUSLY PRESENTED) The method of claim 32, wherein the plurality of discrete regions of stem-forming holes are formed by masking a portion of the surface of the tool.

36. (PREVIOUSLY PRESENTED) The method of claim 32, further comprising deforming of the plurality of stems with a heated surface.

37. (PREVIOUSLY PRESENTED) The method of claim 32, wherein between 5 and 25 percent of the surface of the tool is occupied by the plurality of discrete regions of stem-forming holes.

38. (PREVIOUSLY PRESENTED) The method of claim 32, wherein the web construction defines a localized plane, and wherein the plurality of stems are oriented at an angle that is not normal to the localized plane.

39. (PREVIOUSLY PRESENTED) The method of claim 32, wherein the web construction defines a localized plane, and wherein the plurality of stems are oriented at an angle that is not

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normal to the localized plane, and further wherein the plurality of stems are angled in multiple directions.

40. (PREVIOUSLY PRESENTED) The method of claim 32, wherein the plurality of stem-forming holes are angled such that the plurality of stems are oriented at an angle that is not normal to a localized plane defined by the web construction.

41. (PREVIOUSLY PRESENTED) The method of claim 11, further comprising cooling the discrete quantities of the polymeric material to a non-molten state after forming the plurality of stems.

42. (CURRENTLY AMENDED) A method of making a web construction comprising a plurality of stems distributed in discrete regions on the web construction, the method comprising:
providing a web construction comprising a web and a plurality of discrete polymeric regions on a first major surface of the web, wherein each discrete polymeric region comprises a discrete quantity of polymeric material;

providing a tool comprising a plurality of stem-forming holes formed in a surface of the tool;

pressing the web and the plurality of discrete polymeric regions located on the first major surface of the web against the surface of the tool roll each discrete polymeric region of the plurality of discrete polymeric regions on the first major surface of the web against the surface of the tool when the polymeric material of each discrete polymeric region is above its softening point, wherein a portion of the polymeric material enters the stem-forming holes; and

separating the web construction from the surface of the tool, wherein each discrete polymeric region comprises a plurality of stems formed by the stem-forming holes.

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43. (PREVIOUSLY PRESENTED) The method according to claim 42, further comprising deforming the plurality of stems to produce an enlarged end on each stem of the plurality of stems.
44. (PREVIOUSLY PRESENTED) The method according to claim 42, wherein the plurality of discrete polymeric regions are located on only one major surface of the web.
45. (PREVIOUSLY PRESENTED) The method according to claim 42, wherein the plurality of discrete polymeric regions are separated by inter-regions revealing exposed portions of a first major surface of the web.
46. (PREVIOUSLY PRESENTED) The method according to claim 42, wherein the web comprises loop structures adapted to lock with the plurality of stems.
47. (PREVIOUSLY PRESENTED) The method according to claim 42, wherein the web comprises an elastic web.
48. (PREVIOUSLY PRESENTED) The method according to claim 42, wherein the plurality of discrete polymeric regions comprises a plurality of stripes extending over the first major surface of the web.
49. (PREVIOUSLY PRESENTED) The method according to claim 42, wherein each stem of the plurality of stems comprises a hook.
50. (PREVIOUSLY PRESENTED) A method of manufacturing a mechanical fastener, the method comprising:

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providing at least one discrete quantity of polymeric material on a fibrous major surface of a nonwoven web, wherein the at least one discrete quantity of polymeric material forms at least one discrete polymeric region entangled with the fibrous major surface; and
forming a plurality of stems in the at least one discrete polymeric region.

51. (PREVIOUSLY PRESENTED) The method according to claim 50, further comprising simultaneously pressing the at least one discrete quantity of polymeric material against the fibrous major surface of the nonwoven web while forming the plurality of stems.

52. (PREVIOUSLY PRESENTED) The method according to claim 50, wherein the nonwoven web comprises a film layer.

53. (PREVIOUSLY PRESENTED) The method according to claim 52, wherein the film layer comprises an elastic film layer.

54. (PREVIOUSLY PRESENTED) The method according to claim 50, wherein the nonwoven comprises an elastic web.

55. (PREVIOUSLY PRESENTED) The method according to claim 50, wherein the at least one discrete polymeric region is surrounded by the fibrous major surface of the nonwoven web.

56. (PREVIOUSLY PRESENTED) The method according to claim 50, wherein the at least one discrete polymeric region comprises a plurality of discrete patches on the fibrous major surface of the nonwoven web.

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57. (PREVIOUSLY PRESENTED) The method according to claim 50, further comprising deforming the plurality of stems to produce an enlarged end on each stem of the plurality of stems.

58. (PREVIOUSLY PRESENTED) A method of making a web material having a plurality of stems extending from discrete regions of the web, the method comprising:

providing a web;

providing a plurality of discrete quantities of a polymeric material on a first major surface of the web at a temperature above its softening point, wherein a plurality of discrete polymeric regions are formed on the first major surface of the web; and

forming a plurality of stems in each discrete polymeric region of the plurality of discrete polymeric regions after forming the plurality of discrete polymeric regions.

59. (NEW) The method according to claim 11, wherein providing the plurality of discrete polymeric regions on the first major surface of the web comprises applying the plurality of discrete polymeric regions to the first major surface of the web from the first major surface of the web.

60. (NEW) The method according to claim 11, wherein each discrete polymeric region of the plurality of discrete polymeric regions comprises a discrete patch surrounded on all sides by the first major surface of the web.

61. (NEW) The method according to claim 11, wherein each stem of the plurality of stems comprises an end spaced away from the first major surface of the web.

62. (NEW) A method of making a mechanical fastener, the method comprising:
providing a substrate comprising a fibrous first major surface and a second major surface;

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providing a plurality of discrete quantities of a polymeric material on the fibrous first major surface of the substrate at a temperature above its softening point, wherein a plurality of discrete polymeric regions are formed on only the first major surface of the substrate, wherein the plurality of discrete polymeric regions are not located on the second major surface of the substrate, and wherein the plurality of discrete polymeric regions are entangled with the fibrous first major surface of the substrate; and

forming a plurality of stems in each discrete polymeric region of the plurality of discrete polymeric regions on the fibrous first major surface of the substrate.

63. (NEW) The method according to claim 62, wherein providing the plurality of discrete polymeric regions on the first major surface of the substrate comprises depositing the plurality of discrete polymeric regions on only the first major surface of the substrate.

64. (NEW) The method according to claim 62, wherein the plurality of discrete polymeric regions comprises a plurality of discrete patches, wherein each discrete patch is surrounded on all sides by the first major surface of the substrate.

65. (NEW) The method according to claim 62, wherein forming the plurality of stems in each discrete polymeric region and entangling the discrete polymeric regions with the fibrous first major surface of the substrate comprises pressing each discrete quantity of polymeric material against the fibrous first major surface of the web while forming the plurality of stems.

66. (NEW) The method according to claim 62, wherein the substrate comprises a film layer.

67. (NEW) The method according to claim 66, wherein the film layer comprises an elastic film layer.

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68. (NEW) The method according to claim 62, wherein the substrate comprises an elastic substrate.
69. (NEW) The method according to claim 62, further comprising deforming the plurality of stems to produce an enlarged end on each stem of the plurality of stems.
70. (NEW) A method of making a web material having a plurality of stems extending from discrete regions of the web, the method comprising:
- providing a web comprising a fibrous first major surface and a second major surface;
 - depositing a plurality of discrete quantities of a polymeric material on only the fibrous first major surface of the web at a temperature above its softening point, wherein a plurality of discrete polymeric regions are formed on only the fibrous first major surface of the web, wherein each discrete polymeric region of the plurality of discrete polymeric regions comprises a discrete patch surrounded on all sides by the fibrous first major surface of the web, and wherein the plurality of discrete polymeric regions are entangled with the fibrous first major surface of the web; and
 - forming a plurality of stems in each discrete polymeric region of the plurality of discrete polymeric regions on the fibrous first major surface of the web, wherein each stem of the plurality of stems comprises an end spaced away from the fibrous first major surface of the web.